

CLAIMS

Claim 1 (original): A composite material comprised of a plurality of electrical excitation zone- treated, adhesive coated beads having average diameters between about 1 and about 10 mm and of which at least 50 percent are at least 50 percent coated with an adhesive and wherein a cured form of said adhesive has a hardness ranging from about Shore A 20 to about Shore A 95 and is used in a quantity such that it represents between about 20 and about 80 weight percent of the composite material and thereby serving to create a system of void spaces that constitutes from about 10 to about 40 volume percent the total volume of said composite material.

Claim 2 (original): The composite material of claim 1 wherein the adhesive coated beads have average diameters between about 1 and about 4 mm.

Claim 3 (original): The composite material of claim 1 wherein said beads are inelastic.

Claim 4 (original): The composite material of claim 1 wherein said beads are elastic.

Claim 5 (original): The composite material of claim 1 wherein said beads are made of polymeric materials selected from the group consisting of polyethylene, propylene and ethyl propylene copolymer.

Claim 6 (original): The composite material of claim 1 wherein said system of void spaces is substantially comprised of substantially regularly distributed void spaces.

Claim 7 (original): The composite material of claim 1 wherein the beads have diameters ranging from about 1 mm to about 4 mm.

Claim 8 (original): The composite material of claim 1 wherein said beads are solid.

Claim 9 (original): The composite material of claim 1 wherein said beads are hollow.

Claim 10 (original): The composite material of claim 1 wherein said beads are made of a ceramic material.

Claim 11 (original): The composite material of claim 1 wherein said beads are made from a glass material.

Claim 12 (original): The composite material of claim 1 wherein said beads are made of a plastic material.

Claim 13 (original): The composite material of claim 1 wherein the beads have one or more holes passing through their bodies.

Claim 14 (original): The composite material of claim 1 wherein said beads are made of a thermosetting material.

Claim 15 (original): The composite material of claim 1 wherein said beads are made of a thermoplastic material.

Claim 16 (original): The composite material of claim 1 wherein the adhesive is made from a two part resin.

Claim 17 (original): The composite material of claim 1 wherein the adhesive is made from a thermosetting synthetic resin.

Claim 18 (original): The composite material of claim 1 wherein the adhesive is made from a thermoplastic synthetic material.

Claim 19 (original): The composite material of claim 1 wherein said beads are of different sizes.

Claim 20 (original): The composite material of claim 1 wherein said beads are comprised of a mixture of different kinds of beads.

Claim 21 (original): The composite material of claim 1 wherein said beads are coated with a coupling agent to promote bead/adhesive bonding.

Claim 22 (original): The composite material of claim 1 wherein said beads are electrical excitation zone-treated more than once to accomplish more than one kind of treatment.

Claim 23 (original): The composite material of claim 1 wherein said beads are coated with a polymeric material by the action of an electrical excitation zone treatment.

Claim 24 (original): The composite material of claim 1 wherein said beads are spherical.

Claim 25 (original): The composite material of claim 1 wherein said beads are ellipsoid.

Claim 26 (original): The composite material of claim 1 wherein said beads are made of different polymeric materials.

Claim 27 (previously presented): The composite material of claim 1 wherein said material is placed in a cloth casing.

Claim 28 (previously presented): The composite material of claim 1 wherein said material is placed in a net casing.

Claim 29 (original): The composite material of 1 wherein said material is used in conjunction with a hard plastic, outer shell.

Claim 30 (original): The composite material of claim 1 wherein at least 50 percent of the beads are at least 80 percent covered by the adhesive.

Claim 31 (original): A composite construction material comprised of a plurality of electrical excitation zone treated, adhesive coated beads having average diameters between about 1 and about 10 mm and of which at least 50 percent are at least 50 percent coated with an adhesive and wherein a cured form of said adhesive has a hardness ranging from about Shore A 20 to about Shore A 95 and is used in a quantity such that it represents between about 20 and about 80 weight percent of the padding material and thereby serving to create a system of void spaces that constitutes from about 10 to about 40 volume percent the total volume of said composite construction material.

Claim 32 (original): A water permeable, composite construction material comprised of a plurality of electrical excitation zone treated, adhesive coated beads having average diameters between about 1 and about 10 mm and of which at least 50 percent are at least 50 percent coated with an adhesive and wherein a cured form of said adhesive has a hardness ranging from about Shore A 20 to about Shore A 95 and is used in a quantity such that it represents between about 20 and about 80 weight percent of the padding material and thereby serving to create a system of void space that constitutes from about 10 to about 40 volume percent the total volume of said water permeable, composite construction material.

Claim 33 (original): A breathable, bead/adhesive/void space padding material, said material being comprised of a plurality of electrical excitation zone treated, adhesive coated beads having average diameters between about 1 and about 10 mm and of which at least 50 percent are at least 50 percent coated with an adhesive and wherein a cured form of said adhesive has a hardness ranging from about Shore a 20 to about Shore A 95 and is used in a quantity such that it represents between about 20 and about 80 weight percent of the padding material and thereby serving to create a system of void spaces that constitutes from about 10 to about 40 volume percent the total volume of said padding material.

Claims 34 and 35 (canceled)

Applicant would also call attention to the fact that the primary claims have not been amended during the course of this rather extended patent prosecution